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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,089	10/03/2003	Nicholas F. Borrelli	SP02-053	3535
22928	7590	11/08/2006	EXAMINER	
CORNING INCORPORATED			MCPHERSON, JOHN A	
SP-TI-3-1			ART UNIT	
CORNING, NY 14831			PAPER NUMBER	

1756

DATE MAILED: 11/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/679,089	<b>Applicant(s)</b> BORRELLI ET AL.	
	<b>Examiner</b> John A. McPherson	<b>Art Unit</b> 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,7-11,15,16,26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,7-11,15,16,26 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. This Office action is responsive to the Amendment filed 8/21/06.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As amended, claims 3 and 11 each present a limitation wherein the lenses of the present invention "have sag heights that are greater than 65  $\mu\text{m}$ ", however there does not appear to be support for this limitation in the specification. While the specification does teach that the lenses of the present invention have greater sag heights than traditional lenses (e.g. page 2, line 29 to page 3, line 1), and provides examples having specified sag heights (e.g. Table 3A), there is no description of 65  $\mu\text{m}$  as a lower limit for a preferred sag height range. Additionally, the scope of "greater than 65  $\mu\text{m}$ " includes values greater than those described in the specification. Therefore, the limitation "sag heights that are greater than 65  $\mu\text{m}$ " is viewed as new matter.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7-11, 15, 16, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,572,611 to Bellman et al. (Bellman '611), incorporating US 2,628,160 to Stookey (Stookey '160) by reference, in view of US 5,062,877 to Borrelli et al. [reference AA of the Information Disclosure Statement filed 3/31/05] (Borrelli '877).

Bellman '611 discloses an array of microlenses integral with a glass surface and a method of making the same, the method comprising the steps of selectively exposing a photonucleable, opacifiable glass to short wavelength radiation and subsequently providing a heat treatment. See column 2, lines 55-57; column 5, lines 3-47; and column 9, lines 4-20. Furthermore, Bellman '611 incorporates Stookey '160 by reference for its teaching of several glass composition families. See column 8, line 59 to column 9, line 3 and column 9, lines 21-29.

Stookey '160 teaches a photosensitively opacifiable glass composition preferably comprising 78-83% SiO<sub>2</sub>, 10-13% Li<sub>2</sub>O, 2-5% K<sub>2</sub>O, up to 10% Al<sub>2</sub>O<sub>3</sub>, 0.001-0.020% of silver computed as AgCl, i.e. 0.00075-0.015% Ag [based on atomic weights of 107.868 for Ag and 35.453 for Cl,  $107.868/(107.868 + 35.453) = 0.75263$  Ag in AgCl, therefore

0.001% AgCl x 0.75263 = 0.00075% Ag and 0.020% AgCl x 0.75263 = 0.015% Ag], and 0.005-0.05% CeO<sub>2</sub>. See column 3, lines 23-46.

However, neither Bellman '611 nor Stookey '160 disclose utilizing an ion exchange step. Borrelli '877 discloses a method of forming optical devices composed of a photonucleable, crystallizable, lithium silicate glass body having at least one glass lens integral with and rising above at least one surface thereof, comprising the steps of selectively exposing the glass to short wavelength radiation, heat treating the glass, and subjecting the glass to an ion exchange reaction wherein sodium and/or potassium ions from an external source are exchanged with lithium ions, the ion exchange reaction being conducted at a temperature 25-125 C above the annealing point of the glass for a time sufficient to produce an lens having an axial height in excess of 100% greater than that of lenses produced solely by selectively crystallizing the glass body. See the abstract; column 3, lines 32 to column 4, line 25; TABLE VIII; column 9, lines 29-31; and column 10, lines 1-4. It would have been obvious to utilize an ion exchange step, as taught by Borrelli '877, in the process of Bellman '611 (which incorporates Stookey '160 by reference) because it is taught that providing an ion exchange step increase the height of the lenses.

Furthermore, with respect to claims 2, 3, 10 and 11, it is the position of the Examiner that the lens array of Bellman '611 (incorporating Stookey '160) in view of Borrelli '877 would inherently comprise substantially clear, colorless lenses with the sag heights of the presently claimed invention because these properties are obtained as a

result of the photosensitive glass composition utilized in the manufacturing process (e.g. see page 2, line 29 to page 3, line 1 of the present specification).

### ***Response to Arguments***

4. Applicant's arguments filed 8/21/06 have been fully considered but they are not persuasive. With respect to the amount of Ag taught by Stookey '160, Applicant argues that the Examiner computed 0.001-0.020 wt% AgCl had 0.0075-0.015 wt% Ag, which is larger than the amount of Ag in the present invention. However, the lower limit of the range computed by the Examiner in the previous office action is clearly incorrect, because  $0.001\% \text{ AgCl} \times 0.75263 = 0.00075\% \text{ Ag}$ , not 0.0075% Ag as was stated in the rejection set forth in paragraph 5 of the Office Action mailed 5/17/06. This error has been corrected in the rejection set forth above.

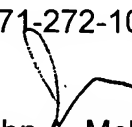
Furthermore, Applicant argues that the higher concentration of Ag in the applied prior art would make the lenses yellow and result in smaller sag heights. However, the amount of Ag taught by Stookey '160 is within the range of the presently claimed invention, and the color and sag height of the resulting lenses are inherent material-dependent properties.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. McPherson whose telephone number is (571) 272-1386. The examiner can normally be reached on Monday through Friday, 8:00 AM to 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John A. McPherson  
Primary Examiner  
Art Unit 1756

JAM  
10/31/06